

HP StorageWorks Command View XP
Version 2.0
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1.0 OVERVIEW
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HP StorageWorks Command View XP is a Web-based storage management platform that monitors and configures the HP StorageWorks XP Disk Array family of products. You can access Command View from remote locations using the Internet and a Web browser.

New features and defect fixes are summarized in sections 2.0 and 3.0. Section 4.0 discusses known issues and section 5.0 provides an appendix for miscellaneous information not covered in the previous sections.

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2.0 FIRMWARE REQUIREMENTS
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Command View 2.0 requires that the managed disk arrays have certain minimum firmware levels.

- For XP12000: Firmware version 50.01.30.00/00 is required. (Firmware version 50.01.30.00/00 or later is recommended.)
- For XP1024/XP128: Firmware version 21.10.09.00/00 is required. (Firmware version 21.10.09.00/00 or later is recommended.)
- For XP512/XP48: Firmware version 1.19.51.00/00 is required. (Firmware version 51.19.59.00/00 or later is recommended.)
- When using the MSA1000 for Flex Copy on XP128 or XP1024, use MSA1000 firmware version 4.32.
- When using the MSA1000 for external storage or Flex Copy on XP12000 use MSA1000 firmware version 4.32.

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3.0 NEW FEATURES

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Command View XP 2.0 provides support for new firmware features, product enhancements, and bug fixes for the HP StorageWorks XP Disk Arrays.

The following new features are supported:

- Management of the new XP12000 array
- Management of external storage with the XP12000 (GUI only)
- Command View provides a new integrated security system. Each user is given a user name and assigned to user group, which determines the tasks the user can perform. For more information about permissions given to each of the user groups, refer to the Command View user guide.
- All new user GUI
- Path Connectivity support for XP12000

Unless otherwise noted in this readme, all new features are documented in the installation and user guides, which are provided on the Command View CD.

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4.0 DEFECT FIXES

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This version of Command View fixes several defects:

- Path Connectivity CLI now reports disc mech location information (for example, R1000,R1100,R1200,R1300)
- Support removed for Auto LUN for XP48/XP512
- CLI now supports deletion of all LUNs from LUN groups
- Total cache size values now available through the CV CLI
- JRE required by Command View management station is now installed automatically
- A problem occurred when retrieving data from the Command View 1.8A CLI for parity groups 1-17 and above
- In Script Notification/Event Notification, notifications were lost when the Command View server was restarted

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5.0 KNOWN ISSUES

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The issues addressed in this section are known to exist for Command View XP 2.0.

5.1 General Limitations

The following limitations exist for this release:

- A dedicated management station is required

- Coexistence with Performance Advisor 2.0 is supported, but not with versions of Performance Advisor older than 2.0
- IP security feature removed from Command View GUI for XP128/XP1024

The following is NOT supported:

- Command View XP 2.0 or later for the XP256
- AutoLUN support for the XP48/XP512
- Host agent, CLI, or online help support for mainframe systems
- Netscape browsers on Microsoft Windows platforms
- Windows NT management server
- Auto LUN is not supported with Business Copy XP on any XP disk array

5.2 Special FW Requirements for Command View 2.0

Do NOT upgrade to Command View 2.0 on the Command View management station managing XP128/XP1024 arrays if you do not want to upgrade the firmware for these arrays.

The firmware version prior to 21.10.09 for XP128/XP1024 will only work with Command View 1.8B. If you want to manage an XP12000 and still retain firmware versions prior to 21.10.09 for your XP128/XP1024 arrays, you will need a separate Command View management station with Command View 2.0 to manage the XP12000.

5.3 Windows Server 2003 with Command View 2.0

If you are using Windows Server 2003, you must perform the following operation in Internet Explorer before using Command View for the first time:

1. In Internet Explorer, select Tool>Internet Options from the menu. The Internet Options dialog box is displayed.
2. Select the Advanced tab.
3. Clear the Do not save encrypted pages to disk check box.
4. Select OK to close the Internet Options dialog box.

Additionally, ensure that the "IIS Admin Service" is disabled.

1. Select Start > Settings > Control Panel > Administrative Tools > Services.
2. Right-click "IIS Admin Service" and select "Properties".
3. Set the 'Startup Type' to "Disabled".
4. Click OK.

5.4 Installation of Command View 2.0

Make sure that all previous versions of Command View are removed before installing Command View 2.0.

If the "IIS Admin Service" is available on the system, ensure that it is disabled. To do so, use the instructions given in section "5.3 Windows Server 2003 with Command View 2.0".

5.5 Command View Web Client Session Times Out

If the Command View framework session times out, attempts to log in again using the same browser will fail. Close the browser where Command View was running and restart Command View in a new browser.

5.6 Command View Management Station Software Does Not Support Running on a Multiprocessor System

Command View management station software should run on a single-processor system. Running the Command View management server software on a multi-processor system is not formally supported.

5.7 HP-UX Mozilla Web Client Support

Accessing the main CV framework GUI (by browsing to the IP address of the Command View management station) is not supported with any HP-UX Web clients at this time. HP-UX Mozilla web clients are currently only supported for accessing the XP128/XP1024/XP12000 device managers directly using the IP address of the array. Supported HP-UX Mozilla web clients include:

- For HP-UX 11.00, use Mozilla 1.4 with JRE/JPI 1.4.1.07
- For HP-UX 11.11, use Mozilla 1.4 with JRE/JPI 1.4.1.07
- For HP-UX 11.23, use Mozilla 1.4 with JRE/JPI 1.4.1.07

Workaround:

To access the Command View Framework GUI, please use one of the supported Windows web clients:

- For Windows 2000/2003/XP(IA 32), use Internet Explorer 6.0 with JRE 1.4.2

5.8 "hp StorageWorks command view xp" Shortcut

When Command View 1.8 is uninstalled, the shortcut "hp StorageWorks command view xp" remains on the management station's Start >Programs menu. When you install Command View 2.0, a new shortcut, titled "HP StorageWorks", is added and the old shortcut remains. The old shortcut will not work properly for Command View 2.0.

Workaround:

Either use only the new link entitled "HP StorageWorks" or

manually delete the shortcut in the menu by right-clicking on the "hp StorageWorks command view xp" shortcut and selecting Delete.

5.9 Session Timeout Values

User-defined changes to session timeout values as described in the installation guide will be ignored if the timeout is set to 10 minutes or less. If set in that range, CV will use the default of 60 minutes for session timeout. Make sure you set session timeout values to more than 10 minutes.

When the Command View browser session has timed out, you will need to close the browser and log in on a new browser session.

If Performance Advisor 2.0 is invoked from the Command View Web GUI and the Command View Web session times out, you must close all opened Performance Advisor browser sessions and Command View sessions and invoke a new browser session to log on to Command View again.

5.10 Adding Arrays to Command View with Device Panel

Command View 2.0 will allow XP128 or XP1024 arrays running firmware version 21.10.08 to be added using the Device Admin panel, however those configurations are not supported. CV 1.X must be used to manage arrays with FW versions 21.10.08 and older.

Workaround:

Confirm supported firmware version (see 2.0 Firmware Requirements for supported firmware version) before adding an array to Command View. For earlier firmware, manage array with Command View 1.X.

5.11 Viewing Online Help on HP-UX

The Command View online help may not load properly on HP-UX operating systems using Netscape. If this occurs, reload the frame by right-clicking the grayed frame on the left hand side and clicking Reload Frame.

5.12 Multiple LAN Card Limitation

If the Command View management station has two network cards installed, one card on an isolated LAN and another on a corporate LAN, the client may have trouble connecting to the management station if the primary card mapped to the local host is on a different LAN than the client.

To solve this issue, configure the first LAN card to communicate with the hosts and Command View API clients on the SAN. To set the LAN card as the first network card, modify the

bindings order of the network adapters to bind that network card first. This procedure is explained in the installation guide.

5.13 The CV CLI "create host_group" Command Removes Spaces in Host Group Name Input Parameters

The "create host_group" command removes spaces in the host group name input parameters. Use the host group names with no spaces in the CLI.

5.14 Installing Multiple JRE Versions May Cause Command View Applets to Crash Internet Explorer

In Windows, installing an older or unsupported JRE after installing the supported JRE may cause the Command View web client running on that system to crash. First, verify the order you installed the JRE versions and if necessary, uninstall and re-install JRE 1.4.2. Complete the following assuming that JRE 1.3.1 is the supported JRE:

1. Check the timestamps of the JRE installation folders. The JRE 1.3.1 installation folder path is <JRE-install-directory>/JavaSoft/JRE/1.3.x. The JRE 1.4.2 installation folder path is <JRE-install-directory>/Java/j2re1.4.2. If the JRE 1.3.x installation folder has a more recent timestamp than the JRE 1.4.2 installation folder, continue to the next step.
2. If you are solving the problem on the management station, stop all Command View or Performance Advisor services.
3. Uninstall JRE 1.4.2.
4. Download and install JRE 1.4.2 from the Sun Web site.
5. If you are solving the problem on the management station, restart all Command View or Performance Advisor services before using Command View or Performance Advisor.

5.15 OPEN-V CV CLI Support

At this time, OPEN-V is not supported by the CLI, but is supported by the Command View GUI. The CLI will display OPEN-V volumes, but will not create OPEN-V volumes.

5.16 Flex Copy Display Limitation

LUNs and ports that are part of Flex Copy pairs will not be displayed under the CLI, APIs, or in the array management and Path Connectivity GUI status pages.

5.17 Installing and Uninstalling License Keys

If you are unable to install or uninstall license keys for the

XP48 and XP512 disk arrays using the Licensing Management feature, contact your HP account support representative for assistance with installing the license key directly on the array.

5.18 Issues When Special Characters Are Used In Device Administration Fields

In device administration (GUI/CLI), data may be lost if ":" or "~" is used to specify data.

Workaround:

Do not use these special characters.

5.19 SMI-S XP Also Supports XP12000

The "HP StorageWorks SMI-S XP Release Notes" document (for the optional SMI-S XP component) indicates that supported arrays include only the XP128/XP1024. It should also state that SMI-S XP supports the XP12000 array.

5.20 Auto LUN Cannot be Used to Migrate BC Volumes

In the Command View user guide, the Business Copy chapter incorrectly states that Auto LUN can be used to migrate BC volumes. This is currently not supported for any XP arrays.

5.21 Installation of Command View with Performance Advisor

When installing both Command View and Performance Advisor, be sure to install Command View first.

5.22 Storage Domain Definition

The introductory pages for the XP48/XP1024/XP12000 LUN Management documentation uses the term "storage domain" but it is not described well. A storage domain refers to a group of hosts within the same host group.

5.23 LUN Management (XP12000) Option Button

Please do not use the Option button on the LUN Management pane for the XP12000.

5.24 Broken hyperlinks in Product Documentation

When working in the Command View online help system, the following hyperlinks do not work:

(1) In the LUN Management for the XP/128/XP1024/XP12000 table of Contents, the "Overview" link under the Setting User Authentication submenu does not work. You can view this

information in Chapter 14 of the HP StorageWorks Command View XP for XP Disk Arrays user guide.

(2) In the HP StorageWorks Command View XP Frequently Asked Questions, the "Download" link does not work. To access the page, click the Support link in the user interface, then click the "Reference documents" link in the Contents panel.

5.25 CLI Timeout in Modify Mode

Command View CLI modify sessions to XP12000 disk arrays, timeout after five minutes of inactivity. From the CLI prompt in modify mode, if there is no list/set operations from the client, the timeout occurs and the CLI client is disconnected from the array.

Workaround:

Enter a get or set command on the CLI prompt at least once every five minutes. If a timeout occurs, use the "connect" command to reconnect the CLI client to the array.

5.26 Installation Guide Correction

The Command View XP Installation Guide states that kernel 2.4.19 is required for SuSE Linux Enterprise Server 8 hosts. Kernel version 2.4.21 is also supported.

--Issues Concerning Path Connectivity--

5.27 Command View XP Path Connectivity Host Agent Support for HP-UX 11.23pi

Command View XP 2.0 only supports local installation for the HP-UX 11.23pi Path Connectivity host agent.

For HP-UX 11.23pi running on PA-RISC hosts, the applicable file is hostagent_hpux1123PI_PA.tar.

For HP-UX 11.23pi running on IA64 hosts, the applicable file is hostagent_hpux1123PI_IA.tar.

To install the HP-UX 11.23pi host agent:

1. FTP the corresponding .tar file to a directory on the HP-UX 11.23pi host.
2. Extract the .tar file using the tar command.
(For example, tar -xvf hostagent_hpux11.23PI_IA.tar)
This creates a directory named depots under the current directory.
3. Go to the depots directory, and run unix_local_install.sh to install the Path Connectivity host agent.

Note: To uninstall the HP-UX 11.23pi host agent, go to the depots directory, and run `unix_local_uninstall.sh`

5.28 BC/CA Pair Status Information Provided Only for the First 256 LUNs Per Port on XP12000.

Business Copy and Continuous Access Pair Status information on Path Connectivity is provided only for the first 256 LUNs on each array port for the XP12000 disk array.

Workaround: To view Pair Status information for BC/CA on the additional LUNs, use RAID Manager XP.

5.29 BC/CA Pair Status Information not Provided (AIX hosts only)

Business Copy and Continuous Access Pair Status information on Path Connectivity is not provided in this release.

Workaround: To view Pair Status information for BC/CA, use RAID Manager XP.

5.30 BC/CA Navigation Menu Remains in Loading State

The left navigation menu of the Path Connectivity BC/CA pane occasionally loads slowly or remains in Loading state.

Workaround: Use the hyperlinks within the content pane to navigate between the BC/CA pane.

5.31 HP-UX 11.xx Mozilla Limitations

The Web client for HP-UX only supports accessing the Array Management GUI directly using the IP address of the array. Using the IP address of the management station is not supported with the HP-UX Web client.

To diagnose the path, enable the check box for only one path. Multiple selections in the check box on Connectivity Health is not supported.

5.32 Information Missing on Array Security LDEV View Pane

The Array Security LDEV View pane is missing LUN data.

Workaround:

The lun data for a particular cu and ldev is available in both the CVCLI and CV GUI:

The data can be obtained in the CVCLI by executing the command `list lun ex: list lun -port 1F -cu 2 -ldev 82`.

The data can be viewed through the GUI by navigating to

Lun Management->Lun Manager-Lu Path pane and selecting the specific port and host under the host group.

5.33 Path Connectivity Graphical Display

The Path Connectivity Remote Deployment graphical display may not refresh when deploying a large number of hosts. The progress bar for the deployment status may freeze at a certain percentage and does not refresh.

Workaround:

Close and then reopen the graphical display to get the actual status.

5.34 Command View Path Connectivity Administration Truncate Log Function

Problem occurs with the Truncate Log function under the Path Connectivity Administration pane. The log is not truncated and an additional exception is returned in the event log due to this action.

Workaround:

To truncate, perform the following steps:

1. Stop the DCS service by going to Windows Service Administrative Tool and selecting "HpssDataCollectorService."
2. Press the stop symbol.
3. Delete the DataCollectorService.log in the <Install Drive>\HPSS\DataCollectorService\logs directory.
4. Start the DCS service by going to the Windows Service Administrative Tool. Select "HpssDataCollectorService" and click the Start symbol.

5.35 Path Connectivity Shows Exceptions to Set Number and Size of Log Files.

When the HpssDataCollectorService is restarted, you may see two exceptions in the Path Connectivity event logs:

- 1.DataCollectorServiceConfiguration::setMaxLogFile
Size(String)java.lang.NullPointerException
2. DataCollectorServiceConfiguration:
:setMaxLogBackupIndex(String)
java.lang.NullPointerException

Due to this issue, the number of Data Collector Service log for Path Connectivity is fixed to 4 and the size of each log is fixed to 64MB as maximum. No workaround is offered at this time.

5.36 Broken Paths in the Path Connectivity - Connectivity

Health Screen Disappeared After Data Collection

Beginning with Command View 1.8B, paths that have been broken (for example, due to the disconnection of an FC cable) will disappear after the next successful Path Connectivity data collection. If the paths become valid again, they will reappear after the next successful data collection.

When a path is broken, an event will be sent out. You can use the Event Notification module to receive the events:

1. Click on Event Notification in the Command View main window.
2. Click on Event under History in the left menu of Event Notification pane.
3. Select the category "Path Connectivity" and then select the "Serious" checkbox and appropriate time in the right side of the Event pane.
4. Table containing events about the change in path health will be displayed with Event description, Date, Status, HostIPAddress, Hostname, Hostportwnn, Portstate, ArraySerialNo, ArrayProductname, Arraymodel, Arrayportname, Arrayportwnn.
5. To get e-mail notification for these events, please see the user guide or online help for Event Notification.

5.37 Command View XP Path Connectivity Manual "Add Host" Feature

The Add Host feature allows you to record host data on hosts that do not have the Path Connectivity host agent running. Manually adding the hosts one-by-one using the "Add Host" feature under Path Connectivity's Administration screen may not add all information into the database. Use the "Import Host" feature to add the host information.

5.38 Multiple Path Connectivity Instances in a SAN

When communicating with an XP48/XP512, if you have multiple Command View management stations configured in your SAN environment to manage the same SAN resources, Path Connectivity's "Data Collection Service" may conflict with each other. For instance, the Path Connectivity Diagnosis function either hangs or takes a very long time to complete.

Workaround:

Disable the Path Connectivity "Data Collection Service" on one of the management stations. To do this, go to the Windows Services, right-click "HpssDataCollectorService," and then click Stop.

5.39 Not Preserving Original Data in New Path Connectivity Database

If you are upgrading from Command View XP 1.40 or earlier, the installation process will not preserve the user-entered database data. The database content will be lost during the upgrade process.

5.40 Path Connectivity Event Log Pane Filter

A defect in the Path Connectivity Event Log Pane is occurring that allows a pop-up message stating that both hh:mm:ss and hh:mm:ss formats are accepted.

The event filter function by date and time requires the time format to be hh:mm:ss where hh represents a two-digit hour, mm represents a two-digit minute and ss represents a two-digit second in military time.

5.41 The Connectivity Health Screen Will Not Show Physical Path Information for a Solaris Host with Sun's Traffic Manager (MPxIO) Enabled

The Connectivity Health screen provides a table of the paths and path connectivity health statuses between hosts and XP disk arrays. However, for a Solaris host with Sun's Traffic Manager (MPxIO) enabled, the Connectivity Health screen will show a pseudo HBA WWN and a logical path between this pseudo HBA port to the XP disk array.

5.42 Host Agent Deployment Tool

The host agent deployment tool (remote install and update) does not work when trying to install Command View 2.0 or update the host agent from earlier versions of Command View.

Workaround:
Reinstall the host agent.

5.43 Path Connectivity Manual Data Collection May Show Successful Pop-up Message Upon a Failed Host Collection

The Path Connectivity Collect Data Now function may return a successful message for a host collection on existing hosts even though the collection may have failed. Ensure that there are no ERROR events shown in the Path Connectivity event log after a manual data collection.

5.44 A "No such object in table" Error May Occur While Accessing the Administration Screens in Path Connectivity

A "No such object in table" error may occur while accessing the Administration panes in Path Connectivity. This error could occur when attempting to manually add a host on the Host

Discovery - Host Management pane or other Path Connectivity Administration feature combined with a subsequent network delay or timeout during the requested operation.

To resolve this issue, you need to restart the HPSSE2ETomcat service. You can choose to either restart the Command View services through the Start menu:

Note: The following procedure stops and restarts ALL Command View services and will affect processes that are currently making changes to disk array configurations.

- Click Start > Programs > HP StorageWorks Command View XP > Restart Services.

OR

Restart the HPSSE2ETomcat service remotely:

1. Become a member of the <CVXP management server>\Administrators group.
2. From the Control Panel, click Administrator Tools > Computer Management > Action > Connect to another computer, and then connect to <CVXP management server>.
3. From the Control Panel, click Administrator Tools > Computer Management > Services and Applications > Services.
4. Stop and Start the Hpsse2ETomcat service.

Or use the REXEC service:

- rexec <CVXP management server> [-l username]
[-n] "NET STOP Hpsse2ETomcat"
- rexec <CVXP management server> [-l username]
[-n] "NET START Hpsse2ETomcat"

5.45 Connectivity Health Pane Hyperlinks May Not Work

In the Connectivity Health pane under Path Connectivity, some hypertext links in the diagnostics result report frame may not take you back to the main Connectivity Health screen when clicked. Click the Connectivity Health button near the top of the frame to return to the main Connectivity Health screen.

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6.0 APPENDIX

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The information contained within this appendix is information pertinent to Command View not covered elsewhere in the documentation.

6.1 Documentation Provided on the Command View CD-ROM

- HP StorageWorks Command View XP Installation Guide

- HP StorageWorks Command View XP for XP Disk Arrays User Guide
- HP StorageWorks Command View XP Command Line Interface (CLI) Reference Guide
- HP StorageWorks Command View XP Path Connectivity User Guide
- HP StorageWorks Command View XP Path Connectivity Command Line Interface (CLI) Reference Guide
- HP StorageWorks Command View XP and Path Connectivity online help
- HP StorageWorks SMI-S XP Release Notes